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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/029,812  
Filing Date: December 27, 2001  
Appellant(s): JEANNIN, SYLVIE

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Dicran Halajian  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2/25/2008 appealing from the Office action  
mailed 9/27/2007

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Claims 1, 7 and 10 of the U.S. Patent Application serial No. 10/029,812 are unpatentable under 35 U.S.C. § 103 (a) over Ohta in view of Christopher.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,449,021	Ohta et al	11-1999
WO 01/35409	Christopher	5-2001

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 20 is rejected under 35 U.S.C. 102(e) as being anticipated by Ohta et al (US 6,449,021 B1).

**In regards to claim 20**, Ohta et al teach an apparatus for detecting a commercial in a video stream, comprising a detector configured to detect the commercial by detecting at least two consecutive scene changes in a number of consecutive frames the video stream, wherein the number of consecutive frames is less than a further number of frame of the commercial (e.g. column 9, lines 22-38, also see column 10, lines 1-33).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12,14-19, 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (US 6,449,021 B1) as applied to claim 20 above, and further in view of Christopher (WO 01/35409 A2).

See the teaching of Ohta et al above.

**In regards to claim 1**, Ohta et al fail to teach compressing video data and generating compressed video data. Christopher teaches compressing video data and generating compressed video data (e.g. page 6, lines 23-30). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Christopher into the teaching of Ohta et al to eliminate commercial of the decompressed video stream from the recording to decrease the cost and increase the sales (Christopher, page 2, line 15-18).

**Claim 7** is rejected for the same reasons as discussed in claim 1 above, wherein Ohta et al also teach Identifying one of said separators as the beginning of a commercial break when the gap between said one separator and a previous separator is greater than a predetermined threshold value (e.g. column 11, lines 39-59, and figure 17 shows that the scene change section 1 is the beginning of the commercial); Identifying one of said separators as the ending of the commercial break when the gap

between said one separator and a next separator is greater than said predetermined threshold value (e.g. column 11, lines 39-59, and figure 17 shows that the scene change section 4 is the end of the commercial, also see column 8, lines 23-49 for the predetermined threshold value);

**In regards to claim 2**, Ohta et al also teach Identifying one of said separators as the beginning of a commercial break when the gap between said one separator and a previous separator is greater than a predetermined threshold value (e.g. column 11, lines 39-59, and figure 17 shows that the scene change section 1 is the beginning of the commercial);

**In regards to claim 3**, Ohta et al teach Identifying one of said separators as the ending of the commercial break when the gap between said one separator and a next separator is greater than said predetermined threshold value (e.g. column 11, lines 39-59, and figure 17 shows that the scene change section 4 is the end of the commercial, also see column 8, lines 23-49 for the predetermined threshold value);

**Claim 10** is rejected for the same reasons as discussed in claim 1 above, wherein Christopher teaches a playback selector for editing said compression video data to skip said commercial break for a subsequent viewing (e.g. page 2, lines 18-24).

**For claim 11**, Christopher teaches a memory for storing said compressed video data with the identification of the beginning and ending of said commercial break (page 14, lines 10-20).

**For claim 12**, Christopher teaches a decoder for generating decompressed video data (e.g. figure 1, Packet Video Decoder 178, and page 7, line 22-23).

**For claims 4 and 8**, Ohta et al teaches plurality of separators is inserted into said video data at a transmitting source (e.g. column 1, lines 44-47).

**Regarding claim 5**, Ohta et al teach detecting said plurality of separators in said compressed video data includes identifying an abrupt increase in an average Mean Absolute Difference (MAD) value of said generated compressed video data (e.g. column 8, lines 24-53).

**Regarding claims 6 and 9**, Ohta et al teach detecting said plurality of separators in said compressed video data is performed based on an increasing an average Mean Absolute Difference (MAD) value of said generated compressed video data (e.g. column 8, lines 24-53).

**Regarding claim 17**, Ohta et al teach detector detects said plurality of separators based on an abrupt change in an average Mean Absolute Difference (MAD) value of said generated compressed video data (e.g. column 8, lines 24-53)

**Regarding claim 18**, Ohta et al teach compressed video data includes at least one of a quantizer scale, motion vector data, bit rate data, a variation of luminance within a frame, a variation of color within a frame, a total luminance of a frame, a total color of a frame, change in luminance between frames, a mean absolute difference, and a quantizer scale (e.g. column 8, lines 24-53).

**Regarding claim 14**, Ohta et al teach Compressed video data includes an identifier of a transition between a television program and said commercial break (e.g. column 9, lines 4-15, and figure 13)

**Regarding claim 15**, Ohta et al teach compressed video data includes an identifier of a transition between the successive commercial programs (e.g. column 9, lines 4-15, and figures 13, 14).

**Regarding claim 16**, Ohta et al teach compressed video includes an identifier of at least two successive scene cuts (e.g. column 10, lines 8-29).

**For claim 19**, Ohta et al teach a processor is programmed to identify an indicator of at least two scene cuts video data and to generate an identifier of the location in a sequence of said compressed video data coinciding with said indicator of at least two said scene cuts (e.g. column 10, lines 30-33).

**Regarding claims 21-24**, Ohta et al teach there are many number of frames in a video stream. The number of frames does not make any patentable difference because each scene change is detected between the current frame and the previous frame.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (US 6,449,021 B1) and Christopher (WO 01/35409 A1) as applied to claims 1-12 and 14-24 above, and further in view of Sakaguchi et al (US 5,911,029).

See the teaching of Ohta et al and Christopher above.

**For claim 13**, Ohta et al and Christopher fail to teach identifier of a presence of a sequence of uni-color frames. Sakaguchi et al teach identifier of a presence of a sequence of uni-color frames (e.g. column 7, lines 1-8). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the



teaching of Sakaguchi et al into the teaching of Ohta et al and Christopher to simplify the commercial skipping operation (Sakaguchi et al, column1, lines 56-63).

## **(10) Response to Argument**

### **Claim 20:**

In pages 12-13, appellants argue that Ohta et al fail to teach detector configured to detect the commercial by detecting **at least "two consecutive scene changes"** in a number of consecutive frames the video stream.

Ohta et al teach, in column 8, lines 13-18, and column 9, lines 8-11, a scene change detector 15 detects the scene change with respect to two successive frames and record the scene change frame **with "1"** and other frames with "0". Figure 11 of Ohta teaches the "Scene\_Change[]" detector detects all the scene change points (**with "1"**) for frames in a period of one minutes ("FRAME ONE MUNUTE PRIOR TO CURRENT FRAEM"). Column 9, line 65-column 10, line 8 teach all these scene change points are used for commercial detection ("each time the scene change points appear").

***The examiner considers the "scene change points" as taught in Ohta et al correspond to the "scene changes" as in claim 20.***

Column 9, line 21-41, Column 9, line 65-column 10, line 29 and figure 14A-G of Ohta et al teach **"The commercial candidate segment detector 16 creates segments each time a frame having a scene change point of 1 appears"**. Figure 14 (C) shows that there are 10 segments (0, 1, 2, 3...10...etc), and each segment at least

has a beginning and end (two boundaries for each segment, or “**dotted lines**”, or **scene change point**, please notice the “scene change segment” are different from the “scene change points” because each segment has at least two boundaries, and each boundary is a scene change point) corresponds to a scene change point of 1 as shown in figures 14 (B) and 14 (C). The examiner counts the “scene change points”, for scene change **segments** “1”, “2”, “3” and “4” of figures 14 (B) and (c) for illustration: For scene change segment 1, there are **two** scene change points, which consists of two boundaries; for scene change segment 2, there are **three** scene change points, which consists of two boundaries and one scene change point in between; for scene change segment 3, there are **two** scene change points, which consists of two boundaries; for scene change segment 4, there are **five** scene change points, which consists of two boundaries and three scene change points in between. The point the examiner trying to made is **each scene change segment consists of at least two consecutive scene change points and the examiner has already considered the “scene change points corresponding to “scene change” as claimed.** Claim 20 only requires “detecting a commercial in a video stream, comprising a detector configured to detect the commercial by detecting **at least two consecutive** scene changes in a number of consecutive frames the video stream” The teaching of Ohta et al read on claim 20 because Ohta et al use **two, three or five (which is at least two)** scene change points for commercial detection.

**Claims 1, 7 and 10**

Appellants argue Ohta et al does not teach "determining the beginning and ending of a commercial break among said plurality of separators by comparing a gap between said plurality of separators", wherein the separators is defined by detecting at least two consecutive scene change.

**Paragraphs [0038]** of the Patent Application Publication of the instant application, 2003/0,123,841 A1, defines a separator as black frame segment or unicolor frames segment as also shown in figure 3 because the black frame segment consists two scene cut boundaries for example,  $S_{x,1}$  and  $S_{y,1}$ . As shown in figure 3, there's no gap between the separators because the broadcast signal is continuously transmitted and the word "gap" means "a separations in space" in the merriam-webster dictionary. Also figure 4, step 104 and **paragraph [0039]** of the instant application teach to compare the Gap between the "separators" with a threshold value. However, there's no indication of what this threshold value is. Since the instant application is about detecting commercial in a broadcast (television or video) stream. The examiner (or one ordinary skill in the art) interprets the "threshold value" either being the "time" between the separators or the number of frames between the separators.

As discussed for claim 20 above, Ohta et al teach **each scene change segment consists of at least two consecutive scene change points and the examiner has already considered the "scene change points corresponding to "scene change" as claimed. The examiner also considered the "scene change segments" 1 and 4**

**as the separators as claimed because the scene change segment in figure 14 (c) has use two, three or five (which is at least two) scene change points.**

Column 10, line line 59-column 11, line 16 of Ohta et al teach comparing the total time of scene change segments 1 to 4, which is 56 seconds, to multiple of 14 seconds to decide scene change segments 1to 4 is a commercial as shown in figure 14 (G). It is inherent a commercial segment has a beginning and an end, wherein the beginning of the scene **change segment 1** is the beginning of the commercial and the end of **scene change segment 4** is the end of the commercial. Therefore, the time length, 56 seconds, is considered to be the **time “gap”** between separators (scene change segment). Therefore the teaching of Ohta et al read on “determining the beginning and ending of a commercial break among said plurality of separators by comparing a gap between said plurality of separators”.

**(11) Evidence Appendix**

No evidence was provided by appellant.

**(12) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Art Unit: 2621

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

DZ

/Daquan Zhao/

Examiner, Art Unit 2621

May 01, 2008

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